REMARKS

Upon entry of these amendments, claims 21-38 are pending. Claims 1-20 are canceled without prejudice. Applicants reserve the right to pursue any canceled subject matter in a related application. Supports for new claims can be found in the specification and the claims as originally filed. For example, support for new claims 21-29 can be found in the specification, *e.g.*, at page 6, lines 23-27; support for new claim 30 can be found in the specification, *e.g.*, at page 116, line 1, to page 123; support for new claim 31 can be found in the specification, *e.g.*, at page 6, lines 5-22; support for new claim 32 can be found in the specification, *e.g.*, at page 6, line 39, to page 7, line 13; support for new claim 33 can be found in the specification, *e.g.*, at page 4, lines 7-13; support for new claims 34-36 can be found in the specification, *e.g.*, at page 7, lines 29-33; and support for new claims 37-38 can be found in the specification, *e.g.*, at page 28, lines 8-15. No new matter is introduced.

The Examiner has required an election under 35 U.S.C. § 121 of one of the following inventions:

- I. Claims 1-3 and 15 drawn to an isolated polypeptide, a composition comprising a polypeptide and a kit comprising the said composition, classified in class 530, subclass 350.
- II. Claims 4-9, drawn to a method of determining the presence of polypeptide, classified in class 435, subclass 7.1.
- III. Claim 10, drawn to a method for screening for a modulator of activity comprising administering a compound to a recombinant animal, classified in class 800, subclass 3.
- IV. Claims 11-12, drawn to an antibody, classified in class 530, subclass 587.1.
- V. Claims 13-14 and 17-20, drawn to a nucleic acid molecule, a vector comprising a nucleic acid molecule, a cell comprising a vector comprising a nucleic acid molecule and method of producing a polypeptide, classified in class 435, subclass 69.1.

VI. Claim 16 drawn to a method of treating a pathological state in a mammal, classified in class 514, subclass 12.

The Examiner contends that Groups I - VI are distinct, each from the other.

The Examiner additionally requires that Applicants select an amino acid/nucleic acid sequence that is consonant with the elected invention.

In response, Applicants hereby elect the invention of Group V, Claims 13-14 and 17-20 (new claims 21-38), drawn to a nucleic acid molecule, a vector comprising a nucleic acid molecule, a cell comprising a vector comprising a nucleic acid molecule and method of producing a polypeptide, classified in class 435, subclass 69.1.

Applicants also hereby provisionally elect, with traverse, a nucleic acid sequence encoding a polypeptide comprising an amino acid sequence of SEQ ID NO: 104.

With respect to the Examiner's request of electing a single amino acid/nucleic acid sequence, Applicants respectfully traverse and request that the requirement be withdrawn.

The Examiner's attention is invited to M.P.E.P. § 803.04 (Eighth Edition, August 2001, revised May 2004)

It has been determined that normally ten sequences constitute a reasonable number for examination purposes. Accordingly, in most cases, up to ten independent and distinct nucleotide sequences will be examined in a single application without restriction. In addition to the specifically selected sequences, those sequences which are patentably indistinct from the selected sequences will also be examined.

Thus, at least ten (10) sequences should be examined in the instant application. Moreover, as shown in page 116, line 1, to page 127 of the specification, SEQ ID NOs: 100, 102, 104, 106, 108, 110, 112, and 114 all represent variants or fragments (*e.g.*, cytoplasmic domain) of the NOV9 gene. ClustalW alignments of the NOV9 variants and fragments are shown in Appendix A and B (attached hereto). Applicants submit that to search these sequences together would not be a serious burden on the Examiner. The M.P.E.P. § 803 (Eighth Edition, August 2001, revised February 2003) states:

If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to independent or distinct inventions.

Thus, Applicants request that all the nucleic acids encoding SEQ ID NOs: 100, 102, 104, 106, 108, 110, 112, and 114 be elected. In the alternative, Applicants request that election of a single SEQ ID NO be considered a species election, and the remaining SEQ ID NOs of the NOV9 gene be re-entered into the genus once the elected sequence is deemed allowable. Applicant retains the right to petition from the restriction requirement under 37 C.F.R. §1.144.

Upon the allowance of a generic claim, Applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim pursuant to 37 C.F.R. § 1.141.

CONCLUSION

Applicants respectfully request that the amendments and remarks made herein be entered and made of record in the file history of the present application. Applicants respectfully submit that the pending claims are in condition for allowance. If there are any questions regarding these amendments and remarks, the Examiner is encouraged to contact the undersigned at the telephone number provided below.

Respectfully submitted,

Date: January 26, 2005

45,470

Mei L. Benni

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Tel: (203) 974-6306

2 8.705 Appendix A: ClustalW Alignment of NOV9 Variants 07 6 TRAU 2 5008-02 CG 56008-06 SNP13376562 CG 56008-05 CC: \$4008.04 1 MGAAAGWLRGAAPGPRGSQSNETTACSRLVEISRRHQWARSEPSGPPVWNQTCARGRAVG 311531751 CG56008-02 COSSIDERIOS CG56008-04 CGX0008-03 61 QRGRGDEGAMARKLSVILILTFALSVINPLHELKAAAFPQTTEKISPNWESGINVDLAIS 120 311531751 34 TRQYHLQQLFYRYGENNSLSVEGFRKLLQNIGIDKIKRIHIHDHDHHSDHEHHSDHERD COSCOOS-02 34 TRQYHLQQLFYRYGENNSLSVEGFRKLLQNIGIDKIKRIHIHDHDHHSDHEHHSDHERD COSCOOS-05 65 TRQYHLQQLFYRYGENNSLSVEGFRKLLQNIGIDKIKRIHIHDHDHHSDHEHHSDHERD COSCOOS-05 25 TRQYHLQQLFYRYGENNSLSVEGFRKLLQNIGIDKIKRIHIHDHDHHSDHEHHSDHERD COSCOOS-05 27 TRQYHLQQLFYRYGENNSLSVEGFRKLLQNIGIDKIKRIHIHDHDHHSDHEHHSDHERD COSCOOS-05 27 TRQYHLQQLFYRYGENNSLSVEGFRKLLQNIGIDKIKRIHIHDHDHHSDHERHSDHERD COSCOOS-05 27 TRQYHLQQLFYRYGENNSLSVEGFRKLLQNIGIDKIKRIHIHDHDHHSDHERHSDHERH COSCOOS-05 27 TRQYHLQQLFYRYGENNSLSVEGFRKLLQNIGIDKIKRIHIHDHDHHSDHERH 311531751 154 ASGRRNVKDSVSASEVTSTVYNTVSEOTHFLET!ETPRPO...KLFPKDVSSTPPSVTS 210 CO56008-00 154 ASGRRNVKDSVSASEVTSTVYNTVSEOTHFLET!ETPRPO...KLFPKDVSSTPPSVTS 210 CO56008-06 158 ASGRRNVKDSVSASEVTSTVYNTVSEOTHFLET!ETPRPO...KLFPKDVSSSTPPSVTS 220 SVP1337652 177 ASGRRNVKDSVSASEVTSTVYNTVSEOTHFLET!ETPRPO...KLFPKDVSSSTPPSVTS 228 CO56008-05 172 ASGRRNVKDSVSASEVTSTVYNTVSEOTHFLET!ETPRPO...KLFPKDVSSSTPPSVTS 228 CO56008-05 184 SUBJECT O..LETPRDSVSASEVTSTVYNTVSEOTHFLET!ETPRPO...KLFPKDVSSSTPPSVTS 228 CO56008-05 228 ELEDFAMILKAOMIJVKOĀVĻVBALSAMLAYLDMATG!F!GHYAENVSMWIJFĀLĪJAOLFMY 227 311531751 211 KSRVSRLAGRKTNESVSEPRKGFMYSRNTNENFQECFNASKLLTSHGMGIQVPLNATEFN 270 COS6008-02 211 KSRVSRLAGRKTNESVSEPRKGFMYSRNTNENPQECFNASKLLTSHGMGIQVPLNATEFN 270 COS6008-03 243 KSRVSRLAGRKTNESVSEPRKGFMYSRNTNENPQECFNASKLLTSHGMGIQVPLNATEFN 270 SUPH33765C 220 KSRVSRLAGRKTNESVSEPRKGFMYSRNTNENPQECFNASKLLTSHGMGIQVPLNATEFN 288 COS6008-03 220 KSRVSRLAGRKTNESVSEPRKGFMYSRNTNENPQECFNASKLLTSHGMGIQVPLNATEFN 288 COS6008-03 220 COS608-03 220 COS608-0 311 331751 331 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 300 CO 50038-02 340 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 CO 50038-03 340 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF LHLLPHS HASHHH SHSHEEPAMEMKR GPLF SHLS 403 MIRRV F F KFL L SFL VALAVOTLS OD AF MIRRV F F KFL SFL VALAVOTLS OD AF MIRRV F F 311331751 391 SQN I E E SAY F DS T WKGL T ALGGL Y FM F L V EH V L T L I KQ F K DKKKKNQK K P EN DDD V E I KK 450 CG 56008-02 *** CO35008-06 423 SQNI EESAYFDSTWKGLTALGGLYFMFLVEHVLTLIKQFKDKKKNQKKPENDDDVEIKK 458 CO35008-05 409 SQNI EESAYFDSTWKGLTALGGLYFMFLVEHVLTLIKQFKDKKKNQKKPENDDDVEIKK 458 CO35008-06 409 SQNI EESAYFDSTWKGLTALGGLYFMFLVEHVLTLIKQFKDKKKNQKKPENDDDVEIKK 459 CO35008-07 409 SQNI EESAYFDSTWKGLTALGGLYFMFLVEHVLTLIKQFKDKKKNQKKPENDDDVEIKK 459 CO35008-08 409 SQNI EESAYFDSTWKGLTALGGLYFMFLVEHVLTLIKQFKDKKKNQKKPENDDDVEIKK 450 CO35008-08 409 SQNI EESAYFDSTWKGLTALGGLYFMFLVEHVLTLIKGFKDKANGUKKPENDDDVEIKK 450 CO35008-08 409 CO3500 311531751 451 QLSKYESQLSTNEEKVDTDDRTEGYLRADSQEFSHFDSQQPAVLEEEEVMIAHAHPQEVY 510 CC55003402 *** COSCOR-03 311531751 511 NEYVPRGCKNKCHSHFHDTLGQSDDLIHHHHDYHHILHHHHHONHHPHSHSQRYSREELX 570 COSCO03-05 SMP1337652 529 NEYVPRGCKNKCHSHFHDTLGQSDDLIHHHHDYHHILHHHHHONHHPHSHSQRYSREELX 582 COSCO03-05 SMP1337652 529 NEYVPRGCKNKCHSHFHDTLGQSDDLIHHHHDYHHILHHHHHONHHPHSHSQRYSREELX 582 COSCO03-05 SMP1337652 529 NEYVPRGCKNKCHSHFHDTLGQSDDLIHHHHDYHHILHHHHONHHPHSHSQRYSREELX 582 COSCO03-05 SMP1337652 539 NEYVPRGCKNKCHSHFHDTLGQSDDLIHHHHDYHHILHHHHONHHPHSHSQRYSREELX 582 COSCO03-05 SMP1337652 549 NEYVPRGCKNKCHSHFHDTLGQSDDLIHHHHDYHHILHHHONHHPHSHSQRYSREELX 582 COSCO03-05 SMP1337652 549 NEYVPRGCKNKCHSHFHDTLGQSDDLIHHHDYHHILHHHONHHPHSHSQRYSREELX 582 COSCO03-05 SMP1337652 549 NEYVPRGCKNKCHSHFHDTLGQSDDLIHHHDYHHILHHHONHHPHSHSQRYSREELX 582 COSCO03-05 SMP1337652 549 NEYVPRGCKNKCHSHFHDTLGQSDDLIHHHDYHHILHHHDYHHILHHHONHHPHSHSQRYSREELX 582 COSCO03-05 SMP1337652 549 NEYVPRGCKNKCHSHFHDTLGQSDDLIHHHDYHHILHHHONHHPHSHSGRYSREELX 582 COSCO03-05 SMP1337652 549 NEYVPRGCKNKCHSHFHDTLGQSDDLIHHHDYHHILHHHMONHHPHSHSGRYSREELX 582 COSCO03-05 SMP1337652 549 NEYVPRGCKNKCHSHFHDTLGQSDDLIHHHMHONHHPHSHSGRYSREELX 582 COSCO03-05 SMP1337652 549 NEYVPRGCKNKCHSHFHDTLGQSDDLIHHHMHONHHPHSHSHMONHHPHSHSMRH 311531751 571 DAGVATLAWMVIMGDGQHNFSDGLAIGDAFTEGLSSGLSTSVAVFCHELPHELGDFAVLL 630 311531751 COSCORAGO OD DAGVATLAWMVIMGDOLHNFSDGLAIG AFTEGLSSGLSTSVAVFCHELPHELGDFAVLI 603 DAGVATLAWMVIMGDOLHNFSDGLAIG AFTEGLSSGLSTSVAVFCHELPHELGDFAVLI 604 605 BAGVATLAWMVIMGDOLHNFSDGLAIG AFTEGLSSGLSTSVAVFCHELPHELGDFAVLI 605 606 BAGVATLAWMVIMGDOLHNFSDGLAIG AFTEGLSSGLSTSVAVFCHELPHELGDFAVLI 608 606 BAGVATLAWMVIMGDOLHNFSDGLAIG BAFTEGLSSGLSTSVAVFCHELPHELGDFAVLI 608 606 BAGVATLAWMVIMGDOLHNFSDGLAIG BAFTEGLSSGLSTSVAVFCHELPHELGDFAVLI 609 606 BAGVATLAWMVIMGDOLHNFSDGLAIG BAFTEGLSSGLSTSVAVFCHELPHELGDFAVLI 600 606 BAGVATLAWMVIMGTAWMVIMGDOLHNFSDGLAIG BAFTEGLSSGLSTSTS SNP13376562 589 CG56008-05 589 CG56008-04 *** CG56008-03 *** 311531751 631 KAGMT V KQA VLYN ALSAMLAYLGMAT GIFI GHYA EN V SMWIFALTAGL FMYVALVDMV PE 600 COS008-02 633 KAGMT V KQA VLYN ALSAMLAYLGMAT GIFI GHYA EN V SMWIFALTAGL FMYVALVDMV PE 703 KAGMT V KQA VLYN ALSAMLAYLGMAT GIFI GHYA EN V SMWIFALTAGL FMYVALVDMV PE 704 COS008-03 605 KAGMT V KQA VLYN ALSAMLAYLGMAT GIFI GHYA EN V SMWIFALTAGL FMYVALVDMV PE 705 COS008-04 607 COS008-04 608 KAGMT V KQA VLYN ALSAMLAYLGMAT GIFI GHYA EN V SMWIFALTAGL FMYVALVDMV PE 708 COS008-05 609 COS008-05 609 COS008-06 600 COS008-06 600 COS008-07 600 311531751 Ø91 MLHNDASDHGCSRWGYFFLONAGMLLGFGIMLLISIFEHKIVFRINF CG56008-02 *** 737 CG 56008-06 723 MLHN D A S DHGGS R WGYFF LQNAGMLL G FGI MLL I S I F EHK I VFR I NF SNP1375552 724 MLHN D A S DHGGS R WGYFF LQNAGMLL G FGI MLL I S I F EHK I VFR I NF CG 56008-04 725 MLHN D A S DHGGS R WGYFF LQNAGMLL G FGI MLL I S I F EHK I VFR I NF CG 56008-04 726 MLHN D A S DHGGS R WGYFF LQNAGMLL G FGI MLL I S I F EHK I VFR I NF CG 56008-04 727 MLHN D A S DHGGS R WGYFF LQNAGMLL G FGI MLL I S I F EHK I VFR I NF CG 56008-04 728 MLHN D A S DHGGS R WGYFF LQNAGMLL G FGI MLL I S I F EHK I VFR I NF CG 56008-05 729 MLHN D A S DHGGS R WGYFF LQNAGMLL G FGI MLL I S I F EHK I VFR I NF CG 56008-06 720 MLHN D A S DHGGS R WGYFF LQNAGMLL G FGI MLL I S I F EHK I VFR I NF CG 56008-06 724 MLHN D A S DHGGS R WGYFF LQNAGMLL G FGI MLL I S I F EHK I VFR I NF CG 56008-06 725 MLHN D A S DHGGS R WGYFF LQNAGMLL G FGI MLL I S I F EHK I VFR I NF CG 56008-06 726 MLHN D A S DHGGS R WGYFF LQNAGMLL G FGI MLL I S I F EHK I VFR I NF CG 56008-06 727 MLHN D A S DHGGS R WGYFF LQNAGMLL G FGI MLL I S I F EHK I VFR I NF CG 56008-06 728 MLHN D A S DHGGS R WGYFF LQNAGMLL G FGI MLL I S I F EHK I VFR I NF CG 56008-06 729 MLHN D A S DHGGS R WGYFF LQNAGMLL G FGI MLL I S I F EHK I VFR I NF CG 56008-06 729 MLHN D A S DHGGS R WGYFF LQNAGMLL G FGI MLL I S I F EHK I VFR I NF CG 56008-06 729 MLHN D A S DHGGS R WGYFF LQNAGMLL G FGI MLL I S I F EHK I VFR I NF CG 56008-06 720 MLHN D A S DHGGS R WGYFF LQNAGML G FGI MLL I S I F EHK I VFR I NF CG 56008-06 720 MLHN D A S DHGGS R WGYFF LQNAGML G FGI MLL I S I F EHK I VFR I NF CG 56008-06 720 MLHN D A S DHGGS R WGYFF LQNAGML G FGI MLL I S I F EHK I VFR I NF CG 56008-06 720 MLHN D A S DHGGS R WGYFF LQNAGML G FGI MLL I S I F EHK I VFR I NF CG 56008-06 720 MLHN D A S DHGGS R WGYFF LQNAGML G FGI MLL I S I F EHK I VFR I NF CG 56008-06 720 MLHN D A S DHGGS R WGYFF LQNAGML G FGI ML I S I F EHK I VFR I NF CG 56008-06 720 MLHN D A S DHGGS R WGYFF LQNAGML G FGI ML I S I F EHK I VFR I NF CG 56008-06 720 MLHN D A S DHGGS R WGYFF LQNAGML G FGI ML I S I F EHK I VFR I NF CG 56008-06 720 MLHN D A S DHGGS R WGYFF CG 56008-03

Appendix B: ClustalW Alignment of NOV9 Variants CG56008-03 (SEQ ID NO: 102) and CG56008-04 (SEQ ID NO: 104)

CG56008-03	1	MGA AAGWLRGAAPG PRGSQSNETTACSRLVEISRRHQWARSEPSGPPVWNQTCARGRAVG	60
CG56008-04	****		***
CG56008-03	61	QRGRGDEGAMARKLSVILILTFALSVTNPLHELKAAA FPQTTEKISPNWESGINVDLAIS	120
CG56008-04	1	MARKLSVILILTFALSVTNPLHELKAAA FPQTTEKISPNWESGINVDLAIS	51
CG56008-03	121	TRQ YHLQQLF YRYG ENNS LS VEGF RKLLQNIG I DKIKRIHIHHDHDHH S DHEHH S DHERH	180
CG56008-04	52	TRQ YHLQQLF YRYG ENNS LS VEGF RKLLQNIG I DKIKRIHIHHDHDHH S DHEHH S DHERH	111
CG56008-03	181	S DH EHHS DHE HHS DHDHHSAAF T EGLSS	212
CG56008-04	112	S DH EHHS DHH PHS H SQRYSR E ELKD AG V ATLAWMV I MGDGLH NFSDG L A I GAAF T EGLSS	171
CG56008-03	213	G L S T S V A V F C HEL P HELGDF A VLLK AGMT V KQA V LYN A LSAMLAYLGMATG I F I G HYAEN	272
CG56008-04	172	G L S T S V A V F C HEL P HELGDF A VLLK AGMT V KQA V LYN A LSAMLAYLGMATG I F I G HYAEN	231
CG56008-03	273	V SMWI FALT A GLFM <mark>Y</mark> VALVDMVPEMLHN DASDHGCS I WGYF F LQNAGMLLGFGI MLL I SI	332
CG56008-04	232	V SMWI FALT A GLFM <mark>H</mark> VALVDMVPEMLHN DASDHGCS RWGYF F LQNAGMLLGFGI MLL I SI	291
CG56008-03	333	FEHKIVFRINFNSPSSPPPKPPSSQSQPALLSGGAERCRRHSGLDGDNG	382
CG56008-04	292	FEHKIVFRINF	302